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RECOVERY OF AROMA DURING PRESERVE MANUFACTURE--CHERRIES

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In studying the recovery and use of aromas lost in the conventional vacuum process of making fruit jams and preserves, it has been found that this recovery is comparatively simple for cherries. It is necessary only to condense the vapors in a surface condenser and then strip the aroma from the condensate by vaporizing about 20 percent in an essence-recovery unit. Scrubbing the vent gas evolved from the vacuum pan is unnecessary in the case of cherries. The equipment required, in addition to a surface condenser on the vacuum pan, is an essence-recovery unit for processing the condensate. The basic principles of essence recovery were described by Milleville and Eskew in Western Canner and Packer, October 1946. More recent information on equipment design may be obtained from this Laboratory.

The vapors given off during the preserve-making operations are condensed in a surface condenser; the condensate should preferably be 65° F. or lower. The aroma is recovered from the condensate in essence form by vaporizing 20 percent in the essence-recovery apparatus. In returning the essence to the preserves, care should be taken to minimize the loss of the aroma. For instance the essence may be added to the container immediately before addition of the preserves; then the container is closed at once.

If the essence is returned to the preserves, they will have a more characteristic cherry taste and aroma.* Conventional cherry preserves, however, have a characteristically strong flavor, and if the restoration of essence is therefore considered superfluous, the essence itself should find a ready market as flavoring for other food products such as candies, carbonated beverages, ice cream, and the like.

The concept of "fold" as used in the case of essences made by complete stripping of aroma from fruit juices is obviously not applicable here. The potency of the recovered essence can more conveniently be expressed as the number of pounds of preserves required to yield 1 fluid ounce of essence. For example, from a batch of 100 pounds of preserves there might be obtained approximately 2.5 gallons of distillate. During essence recovery, concentration can be appropriately carried to 1/25th the volume of the distillate; that is, 0.1 gallon or 12.8 ounces of essence is recovered. The potency of the essence would therefore be 100 divided by 12.8, or 7.8.

Samples of preserves with and without restored essence are available here, also small samples of the essence itself. Storage tests on preserves with restored essence are now in progress.

* Restoration of essence to jams, jellies and preserves should be cleared with the Food and Drug Administration for admissibility under the Standards of Identity.

STANDARDIZATION OF CHERRY PRESERVES

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The purpose of this report is to describe the methods used in the preparation of cherry preserves and to provide information on the standardization of these products. The report is based on the work of the Bureau of Plant Industry, U.S. Department of Agriculture, and is intended to provide information on the standardization of cherry preserves for the benefit of the public.

The report is divided into two main sections. The first section describes the methods used in the preparation of cherry preserves, and the second section describes the standardization of these products. The methods described in the first section are based on the work of the Bureau of Plant Industry, U.S. Department of Agriculture, and are intended to provide information on the standardization of cherry preserves for the benefit of the public.

If the standard is to be maintained, the methods described in the first section must be followed. The standardization of cherry preserves is a complex process, and it is essential that the methods described in the first section be followed to ensure that the standard is maintained.

The purpose of this report is to describe the methods used in the preparation of cherry preserves and to provide information on the standardization of these products. The report is based on the work of the Bureau of Plant Industry, U.S. Department of Agriculture, and is intended to provide information on the standardization of cherry preserves for the benefit of the public.

Supplies of preserves with and without natural flavors are available here. Also small samples of the various kinds. Storage tests on preserves with natural flavors are now in progress.

Standardization of preserves to June, 1953 and preserves should be placed with the Food and Drug Administration for standardization under the Standards of Identity.